

Amendments to the Claims:

Please amend claim 1 as follows.

Please add new claims 17-21 as presented below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An adjuvant comprising a purified and attenuated toxin (i) having a residual toxic activity of less than one-two thousandth (<1/2000) that of the natural toxin corresponding thereto and (ii) having an activity of enhancing production of an antibody specific to an antigen other than the attenuated toxin, wherein the purified and attenuated toxin has been attenuated by incubation at 30° to 40°C, wherein said purified and attenuated toxin retains serine residues, glutamic acid residues, and lysine residues of the natural toxin in its amino acid sequence, except that a formalin molecule is bound to the lysine residues of the attenuated toxin, wherein the toxin is 95% pure, and wherein said toxin is selected from the group consisting of cholera toxin, pertussis toxin, heat-labile toxin of pathogenic *E. coli*, *Staphylococcus* α toxin and β toxin, and thermostable hemolytic toxin of *Vibrio parahaemolyticus*, wherein the purified and attenuated toxin is obtained by a method comprising the steps of:

(a) purifying a natural toxin selected from the group consisting of cholera toxin, pertussis toxin, heat-labile toxin of pathogenic *E. coli*, *Staphylococcus* α toxin and β toxin, and thermostable hemolytic toxin of *Vibrio parahaemolyticus* or a mutant toxin thereof to 95% or more purity; and

(b) attenuating the purified natural or mutant toxin obtained in step (a) by incubation in the presence of formalin at a temperature of 5°C to 40°C, wherein the purified and attenuated toxin has:

(i) a residual toxic activity of less than one-two thousandth (<1/2000) that of the natural toxin corresponding thereto, and

(ii) an activity of enhancing production of an antibody specific to an antigen other than the attenuated toxin, and retains serine residues, glutamic acid residues, and lysine residues of the natural toxin in its amino acid sequence, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

2. (Previously Presented) The adjuvant of claim 1, wherein said purified and attenuated toxin is a mutant having an amino acid sequence of the corresponding natural toxin wherein one or more amino acid residues are substituted, inserted, deleted, and/or added, and having an adjuvant activity, so long as the mutant retains serine residues, glutamic acid residues, and lysine residues of the natural toxin, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

3. (Previously Presented) The adjuvant of claim 1, wherein said purified and attenuated toxin retains the amino acid sequence of the natural toxin, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

Claims 4-6 (Canceled)

7. (Previously Presented) The adjuvant of claim 1, wherein said residual toxic activity is less than one-ten thousandth (1/10,000) that of said corresponding natural toxin.

Claims 8-15 (Canceled)

16. (New) The adjuvant of claim 1, wherein the temperature does not exceed 40°C.

17. (New) A method of obtaining a purified and attenuated toxin, comprising:

(a) purifying a natural toxin selected from the group consisting of cholera toxin, pertussis toxin, heat-labile toxin of pathogenic *E.coli*, *Staphylococcus* α toxin and β toxin, and thermostable hemolytic toxin of *Vibrio parahaemolyticus* or a mutant toxin thereof to 95% or more purity; and

(b) attenuating the purified natural or mutant toxin obtained in step (a) by incubation in the presence of formalin at a temperature of 5°C to 40°C, wherein the purified an attenuated toxin has:

- (i) a residual toxic activity of less than one-two thousandth (<1/2000) that of the natural toxin corresponding thereto, and
- (ii) an activity of enhancing production of an antibody specific to an antigen other than the attenuated toxin, and retains serine residues, glutamic acid residues, and lysine residues of the natural toxin in its amino acid sequence, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

18. (New) The method of claim 17, wherein said purified and attenuated toxin is a mutant having an amino acid sequence of the corresponding natural toxin wherein one or more amino acid residues are substituted, inserted, deleted, and/or added, and having an adjuvant activity, so long as the mutant retains serine residues, glutamic acid residues, and lysine residues of the natural toxin, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

19. (New) The method of claim 17, wherein said purified and attenuated toxin retains the amino acid sequence of the natural toxin, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

20. (New) The method of claim 17, wherein the residual toxic activity is less than on-ten thousandth (1/10,000) that of the corresponding natural toxin.

21. (New) The method of claim 17, wherein the temperature does not exceed 40°C.